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BY

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My contribution from the Section of Surgery includes the subject of "Urethral Stricture," more especially its treatment. Quoting from an address very kindly sent to me by Mr. Teevan, F. R. C. S., which he lately delivered before the Medical Society of London, I submit a question equally as appropriate to my audience as to his: "How is it that the treatment of stricture in this country is at present, to some extent, a matter of opinion? Is it because the complaint is rare, and that but few facts present themselves to our notice? Not at all," he answers. "The disease is very common and facts abound." That the treatment of stricture is a mere matter of opinion, no one will dispute. Neither can it be disputed that these opinions take wide range of difference, and that this contrariety evidences more or less dissatisfaction with all the remedies within our reach. No less than eleven different methods are offered for the relief of the same disease; and for each of these there is a strenuous advocate, who verily believes that his favorite remedy is the one par excellence, and all others fail of their purpose at least more than his. Fadet suggests, in speaking of eclampsia, that when a great number of remedies is vaunted against a given disease, it simply shows the poverty of the therapeutics on that subject. With a certain qualification, this is true in every department of our science; and of however much narrowness it may presume, I take it that precision of knowledge of the means at our command for the relief of disease, both medical and surgical, keeps close companionship with the much despised routinism. In enumerating the different methods of

treating stricture, I include only those, of course, which are in actual use more or less at the present day. These are :

1st. The purely expectant plan, which involves forced rest in the recumbent position through a more or less considerable period of time.

2d. The plan of gradual dilatation by sounds of an ascending series, with variable intervals, not less than 24 hours usually, between the introduction of the smaller and the next size larger instrument. A strict observance of the French system of graduation is, as a rule, necessary to the proper carrying out of this plan, which is simply to dilate or stretch.

3d. The plan of rapid gradual dilatation with the same instruments, used in the same manner as in the above but with shorter intervals of rest, the whole or one-half of the object of the treatment being accomplished at one sitting, usually under some anaesthetic. The probability of the tissue rupturing under this method is not so great as we would suppose. This depends much upon the exact character of that tissue. In both of these methods the treatment is without *retention* of the sound.

4th. The plan of what is styled "continuous dilatation," in which the instrument is retained for some time, the urine finding its way out between the sound and urethra, thus aiding in the dilatation. (Furneaux Jordan). The length of this time is determined by such circumstances as the nature of the stricture, the irritability of the urethra, convenience of the patient, &c., &c.

5th. The plan of internal urethrotomy.

6th. The plan of external urethrotomy, generally in the perineum.

7th. The plan of subcutaneous section of the urethra.

8th. The plan of electrolysis, or that method by which the disappearance of the cicatricial tissue is effected by a process of "galvano-chemical absorption." The agent employed is the constant current of galvanism, with the negative pole applied to the neoplasm; the positive, according to Newman, leaving a "hard retractile cicatrix," and therefore too severe to justify its use.

9th. The plan of "immediate dilatation," or more properly, rupturing of the stricture. Under this caption we include all those procedures which involve the splitting, divulsing, or instanta-

neous dilatation, so called, of the constriction, and exclude all which merely stretch.

10. The plan of treatment by "the application of caustics for one of two purposes," according to Teevan, who regards the method too sweepingly condemned, "either to cause sloughing of the affected part, or merely to open up the mouth of the stricture when impassable to instruments."

11th. The plan of introducing a guide through the obstruction, and afterwards sliding over it (the guide) another instrument, generally a tube properly apportioned so as to glide easily over the first instrument, and still not too large to be impeded at the point or points of constriction. This is, in fact, another mode of dilatation.

These make up the armamentarium at the disposal of the surgeon in the treatment of urethral stricture. As just stated, they are all more or less in use at the present time. Anything like an exhaustive examination of the merits of each of these is, of course, impossible in a single essay. It would require more time and patience than this occasion would permit, or I am disposed to exact. In the outset of my inquiry with a view to the preparation of this article, it occurred to me that an ascertainment of the views of certain eminent surgeons, upon a few of the vexed questions connected with stricture, might be of use. It would at least reflect the present status of the subject. I accordingly wrote to the following gentlemen:—Drs. Gross, Agnew, Van Buren, McGuire, C. H. Mastin, Gouley, Bumstead, Dawson of Ohio, Pease of the University of Syracuse, Bigelow, McGraw, Yandell, Toland, Maclean, Hodgkin, and Otis, of this country; Barwell, Lister, Timothy Holmes, Bryant, Berkley Hill, Christopher Heath, Teevan, Coulson, Humphrey of Cambridge, Furneaux Jordan, and Sir James Paget, of England. I must take this opportunity of expressing my grateful acknowledgments to the large number who saw fit to respond, and especially to Prof. Martin, of the Johns Hopkins University, for aiding me in my English correspondence.

The questions submitted to each were these, and the answers were requested with a view to publication:

1st. "What is your opinion as to there being such a condition as spasmodic urethral stricture?"

2d. "What, in your opinion, is the best method of treating organic stricture: by dilatation, gradual and forcible; by urethrotomy, internal and external; or by divulsion, granting that the health of the patient is otherwise good?"

3d. "Would the existence of renal disease, such as might be instanced by the presence of granular or hyaline casts, influence you in the selection of your mode of treatment, or would you esteem any one of the above methods to be equally safe?"

4th. "To what extent has your observation confirmed the views of Prof. F. N. Otis, of New York, as to the relation which the calibre of the urethra bears to the size of the flaccid penis, and as to the ability of that gentleman's method of operating to effect a *radical* cure?"

5th. "In what proportion of your cases, treated by any of the methods in common use, would you be willing to state that such a complete relief has been afforded as to secure to the patient an *entire* immunity from the after-introduction of the sound?"

6th. "Does the seat of the stricture influence the nature of your treatment?"

To the first question, as to there being such a condition as spasmodic stricture of the urethra, the answers in the affirmative and negative were about equally divided. Nearly all agree with Profs. Otis and Barwell, that if a *slight* organic narrowing of the canal exists, such a condition as spasm of the urethra can and does take place. This is especially true if the life of the individual is one of such errors and indiscretions as to lead to the secretion of irritating urine. Assuming that the word stricture applies entirely to the organic variety—the reason for which I certainly fail to apprehend—Prof. Holmes, of London, writes as follows: "As to there being such a thing as spasmodic stricture, I never heard it questioned that there is such a thing as spasmodic retention. I have seen a great many cases, one in which the surgeon was led to puncture the bladder when there certainly was no organic stricture." In his further comments he refers me to his Surgery, where I find that he proposes to substitute the words "spasmodic retention," or "spasm of the urethra," for those in common use. Prof. Humphrey, of Cambridge University, after

citing that he had seen many cases of supposed spasmodic retention, "and many in which other surgeons have failed to pass instruments," and after stating that he had "never found any difficulty in passing a fair-sized catheter into the bladder," concludes with the remark, "I have long doubted the correctness of the term 'spasmodic,' as applied to the affection." He "believes that the obstacle is usually seated at the neck of the bladder in these cases, and is usually dependent upon congestion of the mucous or submucous tissue in that region." Prof. Van Buren refers it to perverted action in his "cut-off muscle." Mr. Teevan says that it is "secondary to but not idiopathic." Mr. Furneaux Jordan says that "it does not exist except in conjunction with organic stricture." Profs. Bigelow, McGraw and McLean are of like opinion, and Sir Henry Thompson deals with the subject in this rather sarcastic and summary manner: "I will tell you," he writes, "what stricture is. It is an exceedingly useful excuse for the failure of instruments. It is a 'refuge for incompetence.' When you cannot pass a catheter, when you find it exceedingly difficult to get anything in, and in fact wish to desist, it is a convenient thing, and has always been so recognized, for the doctor to say, 'There is spasm.' There is spasm, says the doctor, now in the muscles, and it will be prudent at present to desist from further attempts to pass an instrument. And no doubt when this is said it is so." Prof. Hodgen is confident that he has seen a "number of cases of 'spasmodic stricture,'" and Prof. D. Hayes Agnew has no doubt of its existence, always of very temporary duration, and not inconsistent with a perfectly healthy urethra, the constriction being caused "by some irritant."

There is another, and perhaps increasingly numerous group of surgeons to-day, who trace "urethral spasm" in any part of the canal, to contractions at or very near the meatus, and in this comparatively unexplored region some brilliant successes have been won. I present the following illustrative case from my own practice:

Mr. X——, residing in a neighboring county, while visiting the city is seized with *retentio urinæ*, which had been preceded for some months by progressive diminution in the size of his stream. For the relief of present distress he consulted a prominent physician,

who, failing to pass a catheter beyond the membranous portion, invited me to meet him. When seen by me his bladder was enormously distended. All attempts to catheterize failed. Supra-pubic aspiration* was then practised without a bad symptom, and with instant relief. Five hours after the bladder had refilled without ability to void the urine. The obstruction was encountered at the same spot (in the membranous urethra), which became passable under ether carried to complete relaxation. The meatus, which was found of less calibre than the urethra, was divided with the meatome. This was followed by the frequent after-insertion of sound until the parts had healed. From that day to this, nearly one year, I am advised that the patient has continued well, with good stream, and without any recurrence of trouble.

Dr. Mastin has very kindly given me an account of a similar case. He says: "I had a young man come to me from the interior of this State (Alabama), who had a close organic stricture at about four inches down the urethra. I opened his meatus and then divided the stricture freely. To my astonishment, in the course of a week I found, that although I could pass a large-sized sound beyond the site of stricture, yet it was impossible to pass it *through the membranous urethra.* Here I found a *firm spasm* which would not permit the smallest sound to enter. I was at a loss to understand the case, never having met with anything of the sort before. I concluded that it must depend upon some reflex irritation. I opened the meatus to the full calibre of the urethra. The result was the spasm at the bulb and membranous urethra vanished as if by magic, and my patient left soon after for his home, cured."

* In an article on "Urethral Fever," recently published, I have noted the great advantage of aspiration over catheterization in relieving retention. It is comparatively harmless and saves the urethra, which, in this condition, is very liable to be injured. The avoidance of urethral fever and shock, which so often succeed to the passage of any instrument, are among the risks of catheterization from which aspiration provides exemption. The plan proposed by Mr. Cock, as communicated by Prof. Barwell, is, "When a patient passes urine only in drops and no passage into the full bladder can be obtained, a fine aspirator-needle may be passed through the linea alba into the bladder—opium given, a couple of leeches applied to the perineum—after this a flexible catheter may nearly always be introduced, or if not at first successful, and the bladder again becomes full, the aspiration may be repeated, and then when the flexible catheter is introduced, and be left in for two or three days, the difficulty is overcome" for the time.

Prof. R. W. Pease, of the Syracuse University, in his address before the New York State Society, which includes a narration of forty-five cases treated by the Otis method, opens as follows:

"In 1874 a gentleman whom I had treated for stricture of the urethra at the membranous portion, for several months, and who, prior to coming under my care, had been treated by two most capable physicians, one a world-known surgeon, drifted away from me because I, like those who preceded me, had failed to give him any relief by the stereotyped method of treatment, the use of bougies. His symptoms, in brief, were a desire to frequently micturate flocculent urine, and a constantly recurring gleet. The protracted malady had sadly undermined his health, as evidenced by great nervous irritability, induced by his disturbed rest. Fortunately he came under the care of Prof. Otis, of New York. The diagnosis made by Prof. O. was a stricture one-half an inch from the meatus, and none at the membranous portion. The meatus was cut to 40 F., that being the capacity of his urethra, and in a few days he returned to Syracuse, every symptom mitigated, and in a few weeks all evidence of contraction of the urethra was removed, the urine cleared up, the nervous symptoms dissipated, and, in short, the patient cured."

In a recent number of the *Lancet*, Mr. Berkley Hill, of the University College Hospital, London, offers the case of "J. B——, æt. 43, admitted July 11th, 1876. Had gonorrhœa at 14 and 16 years of age. Each attack lasted twelve months. For the past six years he had had frequent calls to make water, with straining and small streams. An instrument had never been passed to the bladder, though three years ago ineffectual attempts had been made by a medical man. From December, 1875, to April, 1876, he had attended as out-patient at one of the London Hospitals for the stricture and difficulty in passing his motions (fecal). On admission the patient complained of pain and straining in micturition and difficulty in defecation. The fœces were small and flat. The urethra measured by the urethrometer was equal to 22 F. through the meatus, beyond that point No. 35 F. passed easily up and down the penile part. In the rectum found no induration or contraction of the gut, and the lower part was free from fœces, but

the base of the bladder was distended. There was a dull note on percussing the supra-pubic and left inguinal regions. The meatus was incised until No. 35 French bullet sound could be passed in and out freely. A flexible conde-catheter was passed and more than a pint of urine drawn off. When the bladder was empty, a soft irregular mass behind it became distinct. The patient was ordered to remain in bed and take a sharp purge, which acted copiously. Henceforth he was much relieved, and by July 18th had lost his old symptoms altogether. He passed urine without straining, and could hold it all night; his bowels acted easily; the tumor of the rectum was no longer there. Patient discharged. On October 3 the patient called at the hospital. He was quite free from the troublesome straining, and otherwise well."

I have preferred to give these cases at length, from the practice of different men of unquestioned ability and integrity, to confining the quotations from my own observation, or from the experience of Prof. Otis, who, as the pioneer in this line of inquiry, might be accredited with partiality. From what has been said, and from the very much more that could have been added, I am free to confess that in locating strictures in the deeper parts of the urethra I believe that we have often incorrectly heretofore assumed the existence of organic contractions there in the place of urethral spasm, itself the product of *reflex* irritation at or near the end of the organ. For my own part, despite the criticism of Sir Henry Thompson, I feel compelled to assert my belief in the existence of genuine urethral spasm, sufficiently decided to entirely occlude that canal to both instruments and urine when no organic lesion exists. How else to explain what I am sure is known to every other surgeon, those cases of agonizing retention resulting from immoderate indulgence in alcohol, I am at a loss to say. To my mind the disclaimer as to "spasmodic stricture" in one breath, and the admission in another of its existence as a consequence of some structural change, carries with it all that any of us claim, namely, that given an urethral irritation, whether it be induced by a genuine stricture, vice in eating and drinking, exposure to cold or what not, closure of the urethra will often result, and that closure is due chiefly to spasm. I claim, therefore, that it has an actual existence, and is by no means always, though it may be sometimes, a mere "refuge for incompetence."

The answers to my question as to what would be the means of relief should serious renal disease be detected are varied, some contending for dilatation, some for divulsion, some for urethrotomy, some that the risks are so great as to forbid any operation, and others for the promptest and most thorough interference. Upon this point Dr. Mastin, who, up to May 26, 1877, had performed internal section 280 times without a death, claims that, with uræmic intoxication always imminent, and the necessity for providing against any obstacle to the entire discharge of the urine, the "process of gradual dilatation is too slow." Believing, as he does, that the speedier the relief the better, he recommends free division, and that the urethra be at once restored to its normal calibre. "Inasmuch as the renal disease," says the distinguished surgeon to St. Peter's Hospital, "is *secondary* to the local obstruction, an operation would in such a case become all the more imperative." In only two instances have I operated in Bright's disease; once by dilatation and once by cutting. At no time have I seen better recoveries. As to the kidney trouble there was neither aggravation nor the least improvement. In case 26 of his series, Prof. Pease notes "relief of diabetes," and in case 42 disappearance of "albumen and casts" (not defined), probably epithelial, after the cure of the strictures, both of which are to be classed with those of large calibre. By far the majority of my respondents, however, preferred to treat stricture with renal disease, either by gradual, continuous dilatation or divulsion, rather condemning, at the same time, any operative procedure, except under the clearest necessity.

The answers which were received to the question relating to immunity from the sound were such as I fully expected. Nearly all admitted their ignorance of the practical use of any means which proposes to accomplish this end of cure, and it is, therefore, not surprising that, in their opinion, the sound could not be dispensed with for an indefinite period, if at all. Wade, of London, in his book on Stricture, only too correctly describes the views of surgeons when he says, "After the patient is pronounced cured by his surgeon, he is obliged to continue the systematic use (always repulsive and often hazardous) of a sound or flexible bougie for the rest of his life." The utter impropriety of applying the word

"*cure*" to such a result is manifest. He may be pronounced relieved, but certainly *not cured*, if he cannot lay aside his treatment without the fear of immediate relapse. This being the state of the case, we can administer but faint praise of the progress which surgery has attained in this, one of its most fertile fields. I respectfully submit, therefore, if any method well authenticated comes to us which proposes to do away with this "repulsive and often hazardous" incubus, is it not our duty to give it a judicial and dispassionate trial? The cases reported by Otis, by Pease, and the remark by Mastin "that in a majority of them (280 cases) I have found no recontraction," offer us abundant encouragement to make the effort. While not prepared to submit my own experience in tabulated form at present, I can state that out of over one hundred individuals operated upon to date, only one has returned for treatment. Whether recontraction has taken place in any of the rest I am unable to say. When inquired of by me they have not invariably, though nearly so, spoken of themselves as well, but lacked sufficient scientific interest to undergo the much or little pain and inconvenience of re-examination, being content to let well enough alone. Some of these cases are old enough to come within the range of Mr. Foster's remark at the Clinical Society, "I do not care to see the man now, but I should much like to examine him two years hence." In those cases where the great part of the urethral surroundings are made up of dense, thick connective tissue proliferations, especially in the perineum, completely closing the canal, I seriously question the ability of this or any other method to effect a radical cure. My own cases are too recent on this point, however, for me to be willing to give any opinion, and I think that in these cases exceptional care must be taken in pronouncing them cured.

To the fourth question, as to how far the individual observations had confirmed the views of Prof. Otis as to the relation between the size of the urethra and the flaccid penis, the majority had no answer to make, for the reason that they had had no experience in the matter. Prof. Van Buren says that there is a germ of truth in the theory, but at the same time adds that the size of the flaccid penis is subject to such variations, in the young and old for example, as to make it an unsafe standard. Mr. Teevan says that Dr. Otis failed to "satisfy him (me) as to the rationale of his operations."

Prof. Pease gives unqualified endorsement; the title of whose address already referred to is "Improved Methods of Diagnosis and Treatment of Strictures of the Urethra." Dr. Mastin believes that the operation of Otis is "based upon sound principles, and is a very great advance in genito-urinary surgery." In a foot-note in the last edition of "Gross on the Urinary Organs," it appears "from a number of measurements made upon private and hospital cases that the editor is enabled to add additional confirmatory evidence of the correctness of the estimates of Dr. Otis," though in his letter to me Prof. Gross condemns the practice of measuring the penis. As to the result of my own experience in this matter, covering a very large number of cases, I have not been satisfied that the exact relationship claimed did exist. In the vast majority the relative size of the urethra was rather larger than that laid down by Prof. Otis, and especially was this true of the negro. At my clinic at the College of Physicians and Surgeons many illustrations of this fact, as applied to the urethrae of negroes, occurred. In a large number my measurements corresponded exactly with those made by Dr. O., whilst in not a single one did I find the capacity of the urethra less than the given size of the penis would call for. In consequence therefore of these differences, I have learned to attach less and less importance to the measurements of the penis and more and more to the indications of the urethrometer, an instrument which to my mind is of great use, and without which urethral surgery must be very inexact.

In the answers to the sixth question there was an almost unanimous sentiment in favor of treating close strictures of the penile urethra by internal section, and all the rest by gradual dilatation or by divulsion. Those who preferred internal urethrotomy were decidedly in the minority.

In answering the second question, some curious, not to say amusing, differences were brought out. Prof. Barwell regards divulsion, especially with Holt's instrument, with great disfavor, whilst Prof. Bigelow prefers divulsion, and Prof. McGraw particularly, using Holt's instrument. From what has been written, it is clear that the great drift is towards what is known as the treatment by bougies or *gradual dilatation*, with an exception in favor of internal urethrotomy when the tissue of the stricture is resilient,

is in the pendulous urethra, or when it is dense as in the case of traumatic strictures. Whenever referred to, perineal section is quite generally recommended for the relief of urinary fistula dependent upon stricture. It would seem then that the old dictum of Mercier is still the guide, "Dilate if you can, cut if you cannot."

Mr. Timothy Holmes writes: "I entertain the strongest opinion that the old method by gradual dilatation is in general the best and safest way of treating stricture, and the more so the more reason there is for suspecting renal disease, or other organic diseases of the urinary organs." In fact, the entire English sentiment, as judged by my correspondence, gives the preference to gradual dilatation. Prof. Humphrey is equally as emphatic as Prof. Holmes. In France on the other hand, and to an increasing extent in this country, the method by urethrotomy is the most popular; a popularity which I think is deserved, and is founded upon a more rational, a more scientific basis than is the case with any of the others. If this be so, it may well be asked, "how is it that it has been supplanted to so great an extent by the less rational means?" In the first place, the operation of internal section seems to have been considered as involving more risk to the organ and the life of the individual than is compensated for by any supposed advantage it may possess over the other milder forms of treatment. It, like every other treatment of a given disease, has been injured by special advocacy. Its friends, as usual, in endeavoring to establish for it too great a claim for success, and for freedom from danger, have been absolutely reckless in using it. Reybard, for example, who was a most vigorous advocate of internal urethrotomy, believed that its success was in proportion to the depth of the cut, which should extend as a rule, he said, through the entire thickness of the spongy substance. Prof. Gouley is my authority for the statement that an eye-witness at one of Reybard's clinics, "saw the blade protrude through the skin." Under such practice it is not surprising that much carelessness and indifference to its perils arose; and that many unnecessary complications, such as serious shock, hemorrhage, violent urethral fevers, abscess, persisting chordee, and the like were produced. It is quite needless to condemn such practice, and to urge the injustice of measuring the value of any system by its abuse. Sir Hy. Thompson says that

internal urethrotomy is "safe, efficient, certain," and yields more lasting results than any other treatment — an opinion to a certain degree shared by Van Buren, who, in his letter to me, states that, "in a general way, the more thoroughly a stricture is divided, the better the chance of permanent cure."

Inasmuch as the dangers are chiefly the result of damage done by *too deep* incisions to the perio-urethral tissues involving extravasations of urine and blood, it must occur to every one that the relative safety of the operation depends upon our ability to prevent these untoward accidents. This I believe to be almost invariably attainable by a close attention to the normal capacity of the particular urethra which we have to treat. The necessity for carefully constructed instruments has been duly appreciated, and in my judgment that necessity has been more fully met by Otis' urethrotome and urethrometer, than any other instruments in use. Combined with this there must be great delicacy and skill, with tact in manipulation, otherwise our object will not be reached, and worse than all, a very valuable suggestion may fall into disrepute. This can only be obtained by long and careful experience. If a new departure is worthy of our consideration at all, it is incumbent upon us to use every precaution in testing its merits, so that failure to accomplish its promised success cannot be accredited to either incompetence or neglect.

In regard to that matter of the normal calibre, and the facilities for determining it, we must never lose sight of those expansions directly behind the obstruction. If we do, we will surely insist upon the opening of the urethra to a larger extent than the nature of things would justify, and will certainly be liable to censure for having done too much. Under such a condition as this we have to use external in connection with internal measurement, to enable us to ascertain the proper extent of the incision necessary to *completely* and *entirely* divide the band of tissue which constitutes the coaretation. For after all this is the whole thing in a nut-shell, to see to it that this peculiar cicatricial tissue, so called, with its known tendency to contract, shall be *thoroughly divided*. No matter by what instrument we accomplish it, the important thing for us is to be sure that we do it. After all the known methods, cases have been reported in which no recontraction occurred, which

perhaps is to be explained upon the ground that the *entire* stricture was separated at the time.

Now as to the matter of danger, which is a vitally important point to the proper settlement of the question. This is intended to refer, not only to the mortality which follows, but also to what are entitled the "surgical accidents." Neither of these, of course, can exactly be gotten at any more completely after this than after any other operation, but records, which now and then are open to our inspection, will give us some approximate idea on the subject. In a recent number of the *Lancet* there is a report of 68 cases treated by internal section, at the University College Hospital, London, with a death of four cases, one of which, from surgical kidney and pyelitis, might have followed any other procedure with equal certainty. Among the accidents were abscesses, rigors, hemorrhage, chordee, cystitis, extravasations of urine, and orchitis. Many of these were most probably due to too free cutting. In 49 cases of gradual dilatation, there were 3 deaths, accompanied by abscesses, rigors, hemorrhage, chordee and orchitis, in less proportion than in the former. In 87 cases treated by divulsion, a method that cannot be condemned too severely, there were 6 deaths with the same results as appeared after internal section, but more numerous, both as to relative mortality and accident. I have already referred to the experience of Dr. Mastin covering 280 cases without a single death, to which I may be permitted to add my own of over 100 cases with a similar result. The most frequent accident occurring with me was urethral fever. Abscess occurred but once, hemorrhage of a serious character but four times, one of these cases being a confirmed and broken-down alcoholist who died some months after with spinal sclerosis, retention of urine in 2 cases, and chordee in about one dozen cases, with a promise of permanency in one. None of the other accidents referred to above have occurred with me. For the purpose of showing the extent of the injury inflicted in one of the cases where abscesses occurred, I might append brief notes of a case, but a want of time forbids. As a result of careful and more recent observation, I feel justified in saying that this extensive suppuration would most probably not have occurred if external incisions had been made in the perineum so soon as those signifi-

cant swellings which indicate free internal bleeding were seen. The necessity for such a course is evident, and the dangers of such incisions, which should be on either side of the raphè and sufficiently deep and long to provide a free escape for the infiltrated blood, are so trifling as not to be considered. In the vast majority of my cases absorption of the blood has taken place readily, but this applies to a moderate effusion. When this is considerable such a happy issue is unlikely, and if we do not let it out early, nature will select a means of her own, generally speaking suppuration. The damage which this suppuration can inflict, when the pus contained within those compact perineal tissues begins to make for itself an outlet, is very great.

In further comment upon the dangers of internal section, Prof. Otis, in an article belonging to the Seguin Series, entitled "Stricture of the Male Urethra—its Radical Cure," reports 100 cases without a single death, "hemorrhage in four cases," prostatic abscess in three cases, curvatures of penis during erection in three cases, persisting in one, urethritis in two cases, diphtheritic deposit at wound in three cases, urethral fever in seven cases, retention in one. In conversation with this surgeon some months ago, at least two years after the above publication, he informed me that he had not yet had a death. In the forcible address by Prof. Pease already referred to, and which I commend to your perusal as one of the fairest expositions of the subject I have read, he notes "a remarkable immunity from accidents." His 45 cases yield one case of urethral fever and two of severe hemorrhage.

In further proof of the little risk of this operation when performed with due care, I extract the following from an address delivered before the Section of Surgery, at the annual meeting of the British Medical Association, in Manchester, in August 1877, by Mr. Teevan, himself a strong advocate for treatment by gradual dilatation, and who still quotes approvingly the doctrine of Mercier: "Now for statistics. I think they will be found to be eminently satisfactory, and will carry conviction. They are the largest, I believe, which have ever been placed before the profession, and show what internal urethrotomy can accomplish. No other operation for stricture with which I am acquainted," he says, "can produce such favorable results. I consider that no operation can be performed

on the urethra without a certain amount of risk, but how slight that risk is you will immediately see. I find that the operation has been performed by six surgeons in London, Paris, Mobile and New York, one thousand and ninty-five times with but ten deaths," and he adds in conclusion, "there would probably have been two deaths less had it not been for the crowded state of the wards in the Necker Hospital during the Commune."

We cannot resist the conclusion in the face of such testimony as has been presented, that internal urethrotomy is the safest and the most intelligent way of relieving the obstruction, fraught chiefly with those dangers which have been imposed by partisanship on the one hand, and prejudice or unwillingness to disestablish an old practice on the other. As to the liability of the longitudinal slit—the cicatricial splice of the Americans, the "piece d'allongement" of the French—to contract and become an element of complication, I can invoke the experience of lithotomists to disprove. It seems to me, moreover, that the treatment by splitting, or by divulsion as accomplished by Holt's instrument, involving as it does lacerations of the urethra as well as the stricture, engenders a condition as bad as, if not worse than, the disease which it seeks to remedy.

As to the question, all-absorbing with some, of the propriety of employing the "sonde a demeure." It is my almost invariable habit to reject it. The reasons for its use must be urgent to induce me to incur those grave consequences from its presence, of "inflammation and ulceration" of the mucous membrane for the sake of preventing consecutive hemorrhage. As to the matter of the retained catheter insuring against the flow of urine (only dangerous when ammoniacal and extravasated into the cellular tissue) over the recently cut surface, it needs no discussion. No matter how snugly the instrument may fit the urethra at the time of the operation, we may rest assured that in a few days, and sometimes hours, the urethra will so expand as to admit the passage of urine outside the catheter. This soon becomes charged with calcareous incrustations, and secures the presence of a foreign body in the urethra of a very irritating character. I am not unaware of the claim that there are certain gum instruments to which this exception cannot be taken.